US009249619B2

(12) **United States Patent**
Chang

(10) **Patent No.: US 9,249,619 B2**
(45) **Date of Patent: Feb. 2, 2016**

(54) **WINDOW COVERING**

(71) Applicant: **NIEN MADE ENTERPRISE CO., LTD.**, Taichung (TW)

(72) Inventor: **Chih-Yao Chang**, Taichung (TW)

(73) Assignee: **NIEN MADE ENTERPRISE CO., LTD.**, Taichung (TW)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **14/267,477**

(22) Filed: **May 1, 2014**

(65) **Prior Publication Data**

US 2014/0332170 A1 Nov. 13, 2014

(30) **Foreign Application Priority Data**

May 8, 2013 (CN) ..... 2013 2 0245785 U

(51) **Int. Cl.**

E06B 9/322	(2006.01)
E06B 9/38	(2006.01)
E06B 9/262	(2006.01)
E06B 9/32	(2006.01)

(52) **U.S. Cl.**

CPC . ***E06B 9/38*** (2013.01); ***E06B 9/262*** (2013.01); ***E06B 9/322*** (2013.01); *E06B 9/32* (2013.01)

(58) **Field of Classification Search**

CPC E06B 9/32; E06B 9/322; E06B 9/262; E06B 9/303; E06B 9/38; E06B 9/326; E06B 9/30

USPC ..... 160/176.1 R, 177 R, 170, 171, 168.1 R, 160/173 R

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

2,594,637	A *	4/1952	Gertzon	160/168.1 R
4,333,510	A *	6/1982	Fox	160/177 R
4,567,930	A *	2/1986	Fischer	160/166.1
4,621,673	A *	11/1986	Georgopoulos et al.	160/168.1 R
4,643,238	A *	2/1987	Tachikawa et al.	160/168.1 R
5,103,888	A *	4/1992	Nakamura	160/171
5,133,399	A *	7/1992	Hiller et al.	160/171
5,228,491	A *	7/1993	Rude et al.	160/171
5,538,066	A *	7/1996	Liu	160/173 R
5,671,793	A *	9/1997	Lee	160/168.1 R
5,799,715	A *	9/1998	Biro et al.	160/170
6,095,228	A *	8/2000	Liu	160/173 R
6,158,494	A *	12/2000	Huang	160/84.05
6,189,596	B1 *	2/2001	Chen	160/176.1 R
6,802,356	B2 *	10/2004	Lin	160/168.1 R
6,837,294	B2 *	1/2005	Cheng et al.	160/84.04
6,962,187	B2 *	11/2005	Gilmore et al.	160/170
6,991,020	B1 *	1/2006	Cheng et al.	160/168.1 R
7,025,107	B2 *	4/2006	Ciuca	160/170
7,028,739	B2 *	4/2006	Hsu	160/173 R
7,100,664	B2 *	9/2006	Hsu	160/115

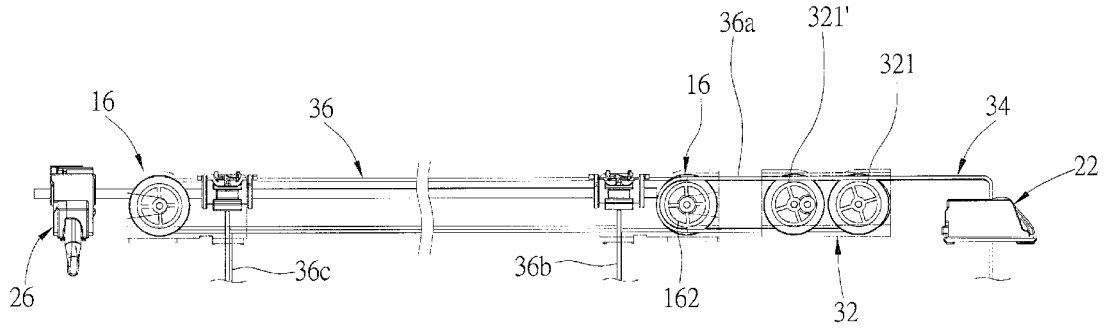
(Continued)

Primary Examiner — Katherine Mitchell
Assistant Examiner — Johnnie A Shablack
(74) *Attorney, Agent, or Firm* — Ming Chow Sinorica, LLC

(57) **ABSTRACT**

A window covering includes a headrail, a bottom rail, a shading member, two pulley assemblies, a car, a control cord, and a transmission cord. The shading member is between the headrail and the bottom rail. The pulley assemblies and the car are received in the headrail, and the car is free for reciprocation. The control cord runs around one of the pulley assemblies and the car, and then going out of the headrail to be pulled or released by a user. The transmission cord has a main section and two branch sections, wherein the main section runs around the other one of the pulley assemblies and the car, and the branch sections go out of the headrail to be connected to the bottom rail.

14 Claims, 16 Drawing Sheets



(56) **References Cited**

U.S. PATENT DOCUMENTS

7,168,476	B2 *	1/2007	Chen	160/170
7,258,297	B2 *	8/2007	Liu	242/398
7,264,035	B2 *	9/2007	Rossato et al.	160/178.2
7,343,957	B2 *	3/2008	Lin	160/168.1 R
7,398,815	B2 *	7/2008	Liang	160/170
7,424,905	B2 *	9/2008	Lai	160/168.1 R
7,487,817	B2 *	2/2009	Liang	160/170
7,493,932	B2 *	2/2009	Cheng	160/173 R
7,624,785	B2 *	12/2009	Yu et al.	160/171
7,832,453	B2 *	11/2010	Lin	160/168.1 R
7,913,738	B2 *	3/2011	Fraser et al.	160/115
7,984,745	B2 *	7/2011	Wen et al.	160/170
8,002,012	B2 *	8/2011	Cheng	160/170
8,267,145	B2 *	9/2012	Fraser et al.	160/115
8,919,416	B2 *	12/2014	Chen	160/170
8,925,615	B2 *	1/2015	Lin	160/170
8,931,539	B1 *	1/2015	Jaggli	160/168.1 R
8,997,826	B2 *	4/2015	Chang	160/168.1 R
2003/0062137	A1 *	4/2003	Su et al.	160/178.1 R
2005/0145345	A1 *	7/2005	Chen	160/173 R
2007/0095486	A1 *	5/2007	Huang et al.	160/171
2007/0119547	A1 *	5/2007	Liang	160/170
2008/0073038	A1 *	3/2008	Cheng	160/168.1 R
2011/0315329	A1 *	12/2011	Hong et al.	160/340
2012/0118515	A1 *	5/2012	Chen	160/170
2013/0313497	A1 *	11/2013	Hsu et al.	254/394
2014/0246156	A1 *	9/2014	Dorny et al.	160/172 R
2014/0332170	A1 *	11/2014	Chang	160/84.02
2015/0020980	A1 *	1/2015	Franssen	160/84.01

* cited by examiner

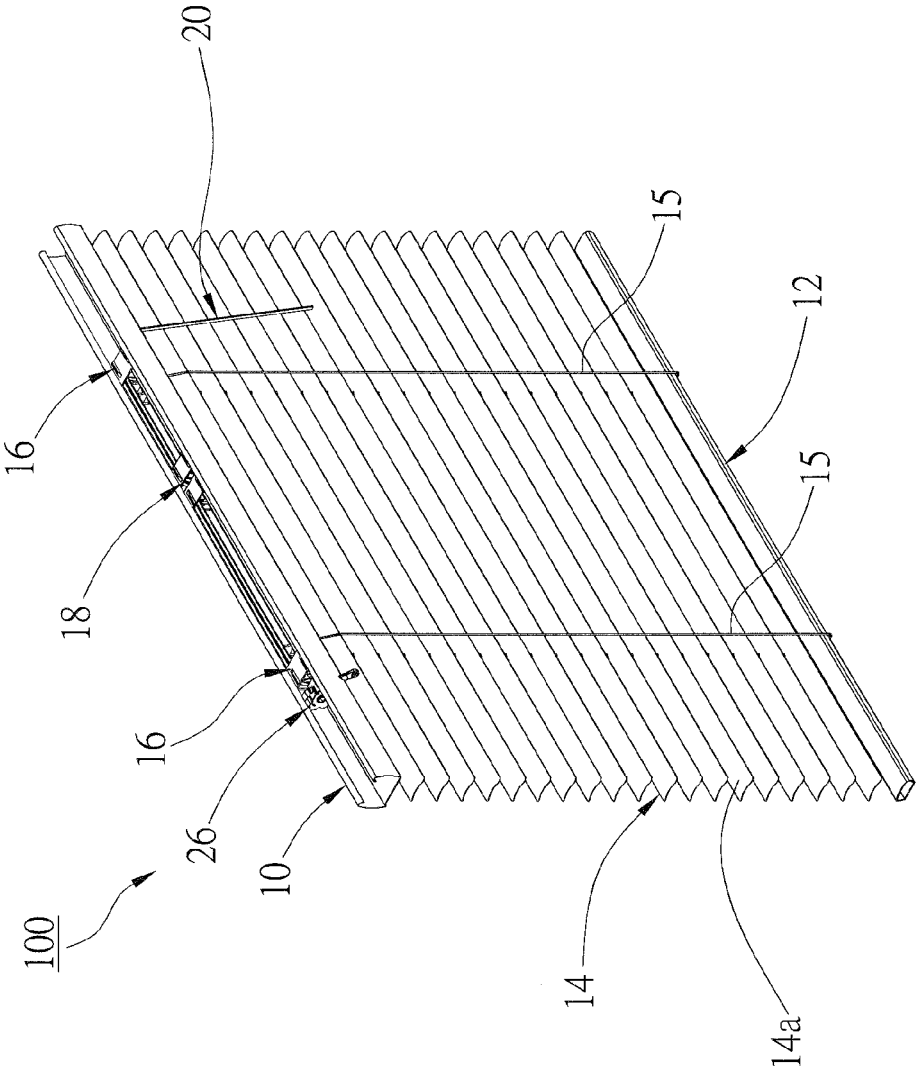


FIG. 1

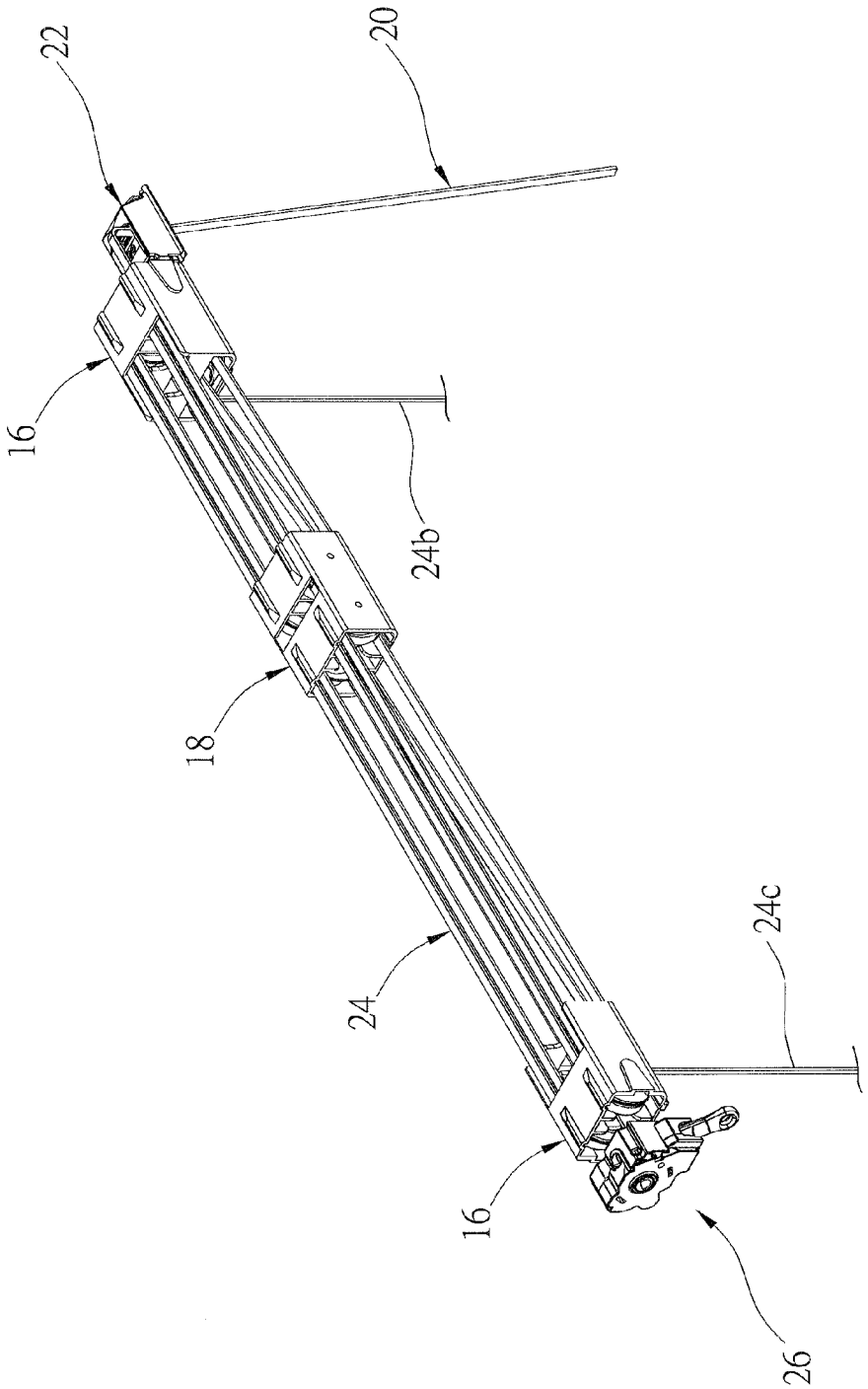


FIG. 2

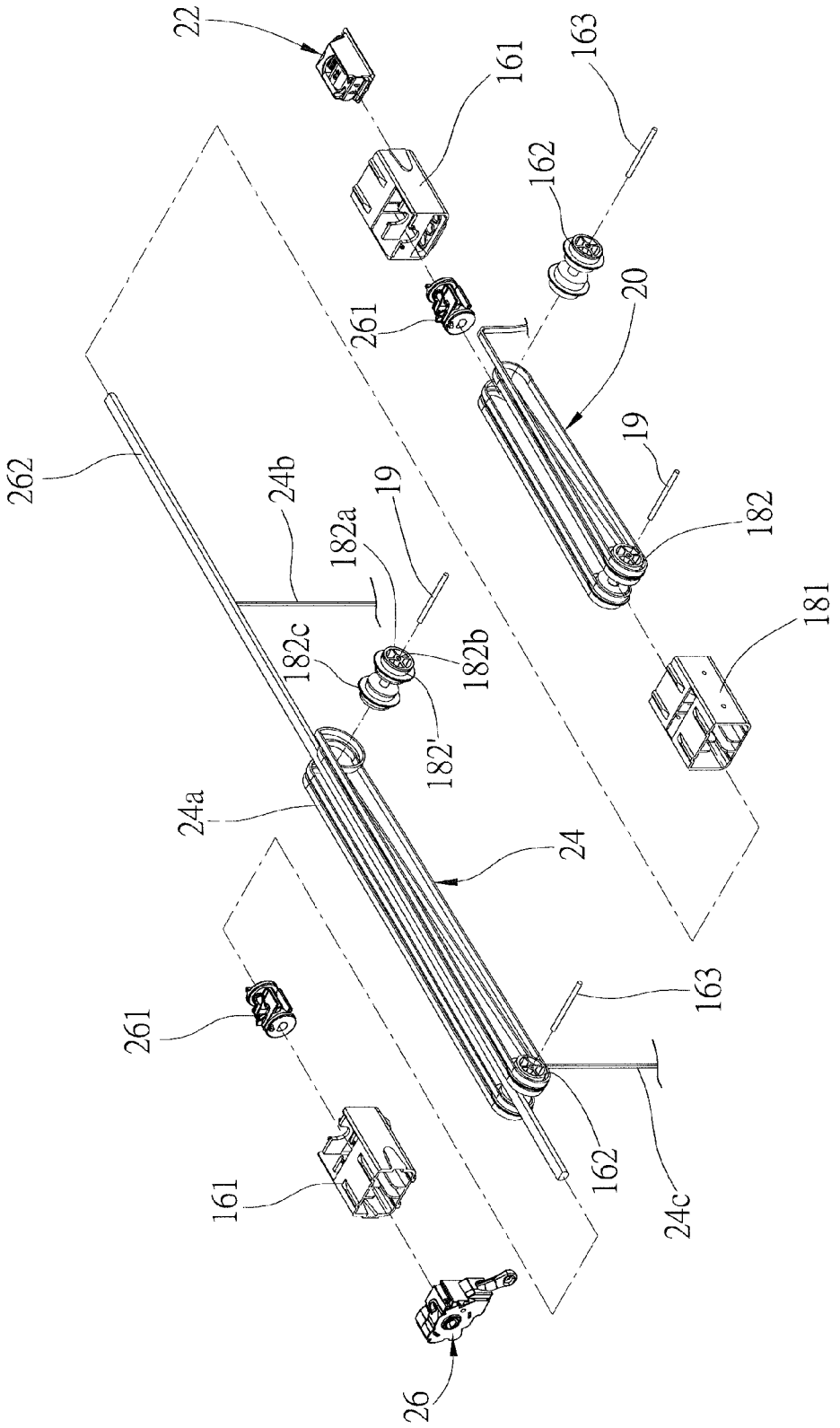

22
161
163
162
261
20
19
262
24b
182a
182
182c
182b
181
182'
24a
24
261
163
161
162
24c
26

FIG. 3

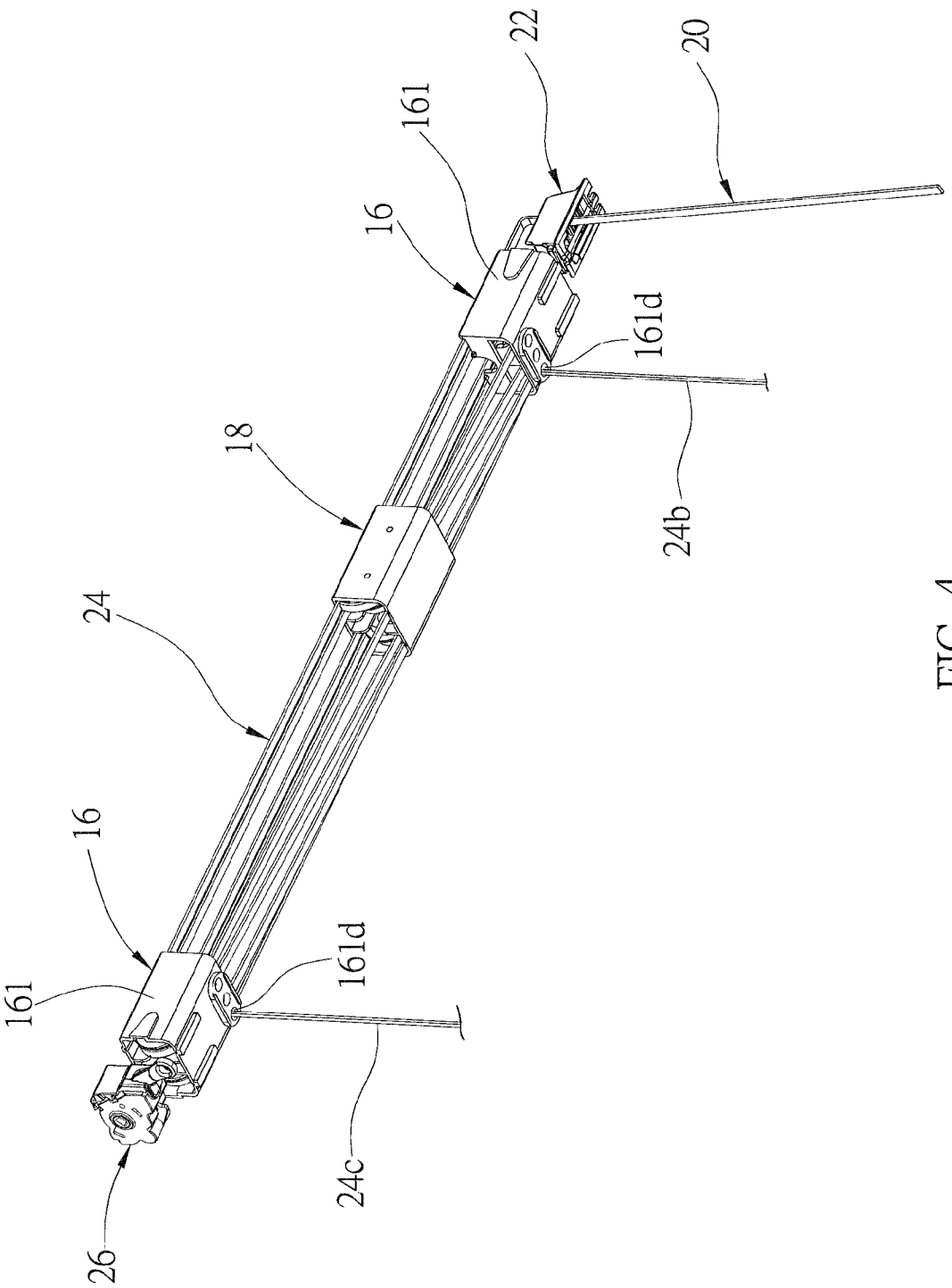


FIG. 4

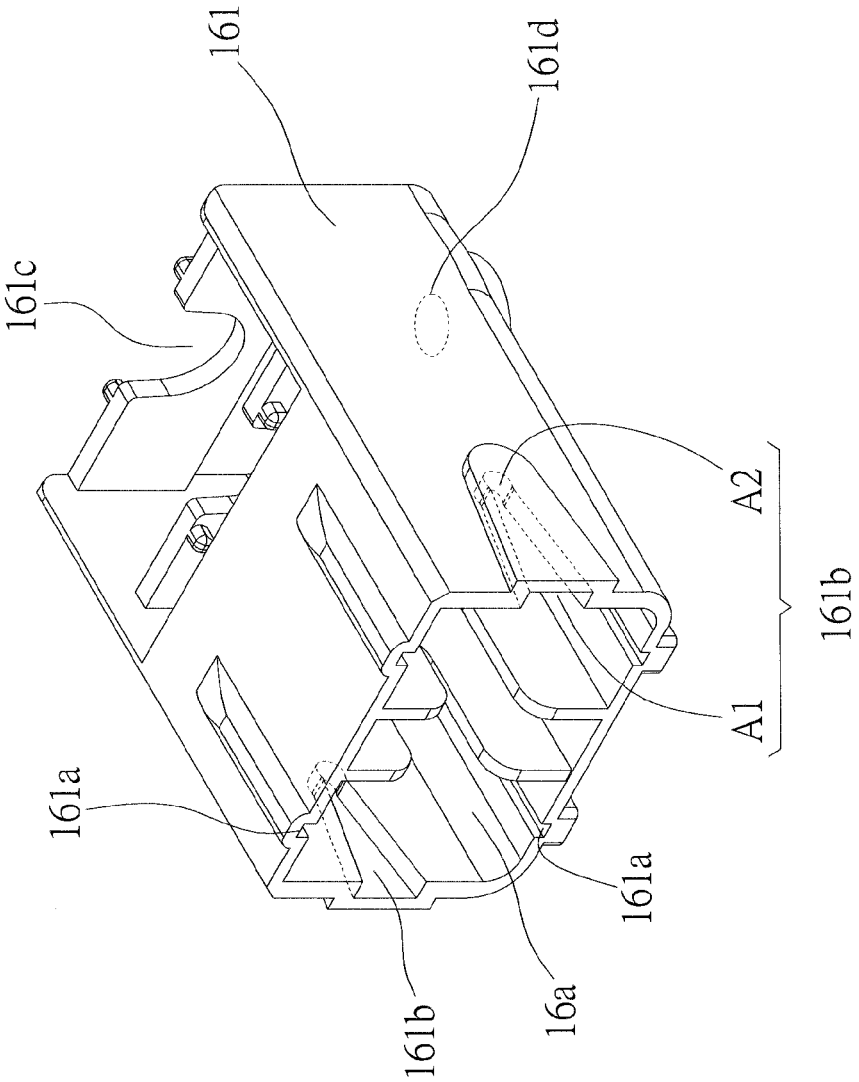


FIG. 5

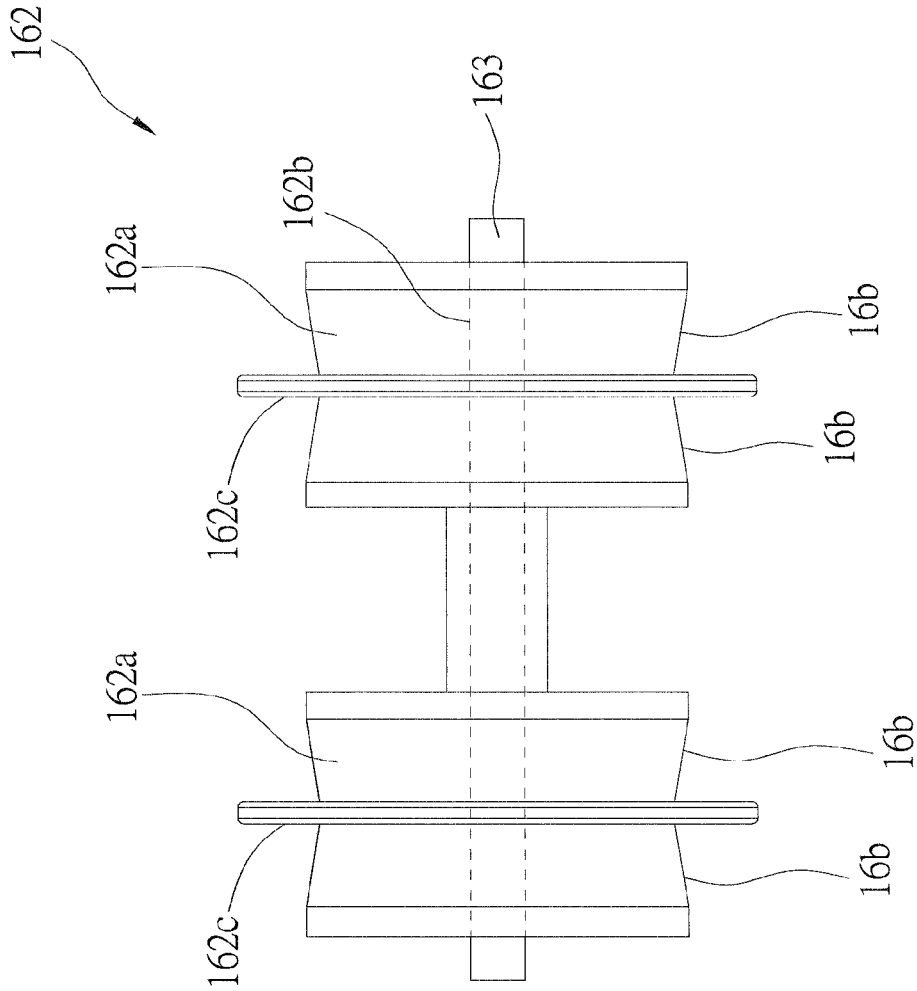


FIG. 6

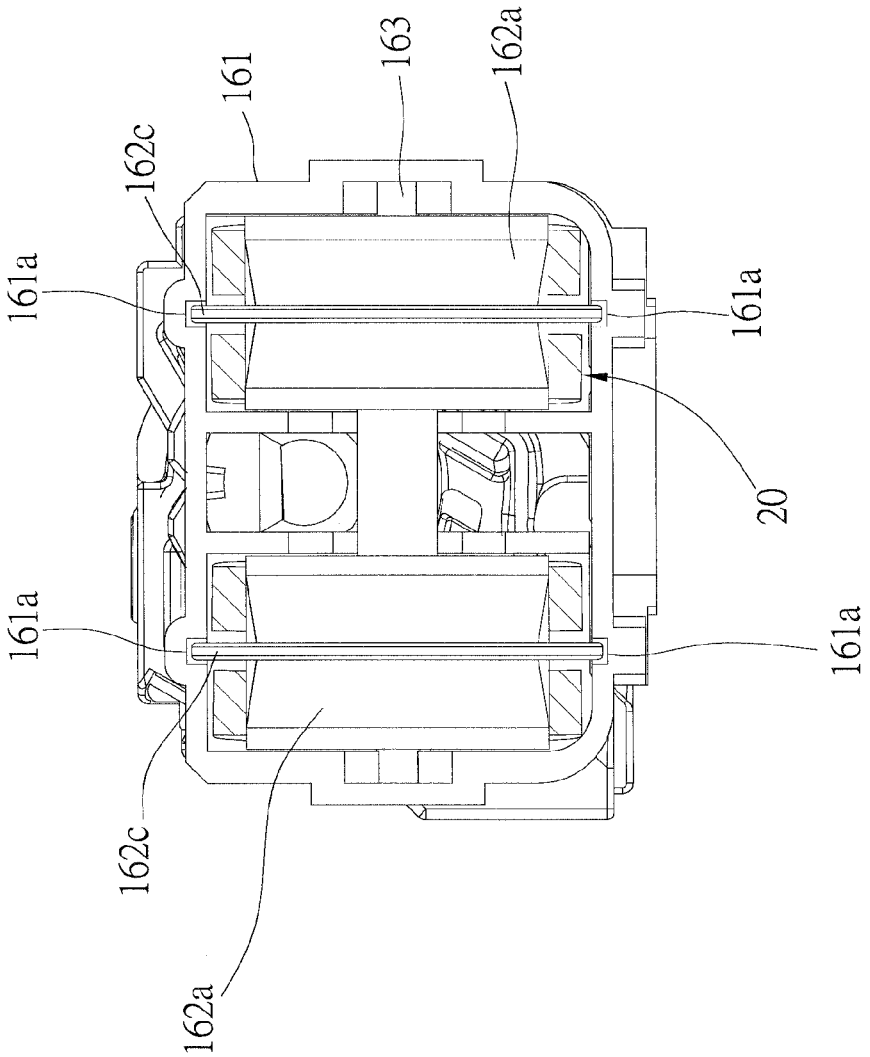


FIG. 7

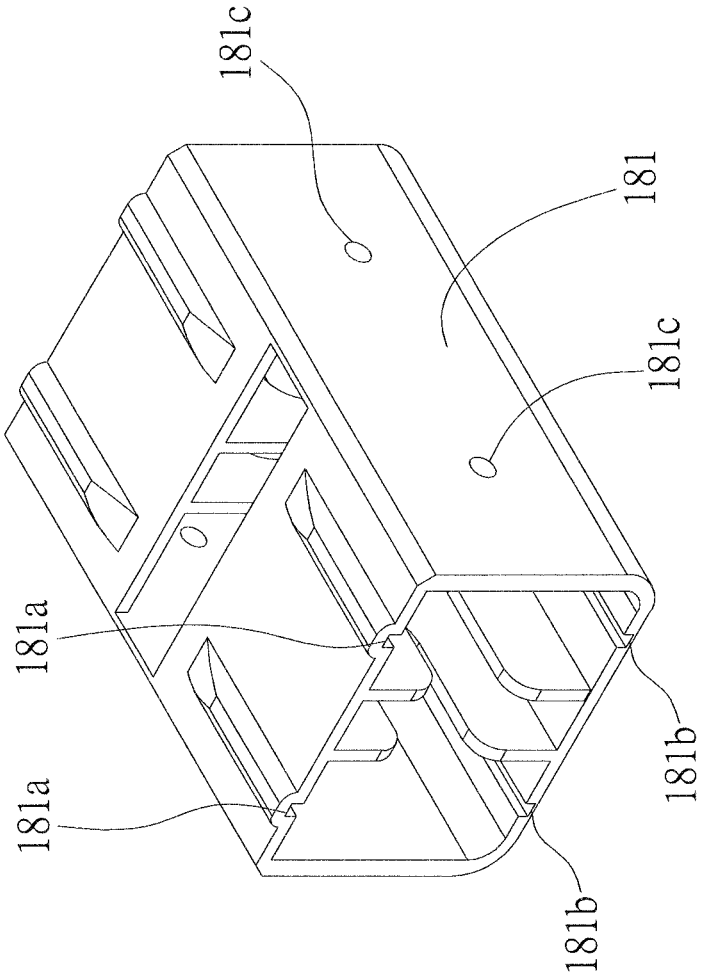


FIG. 8

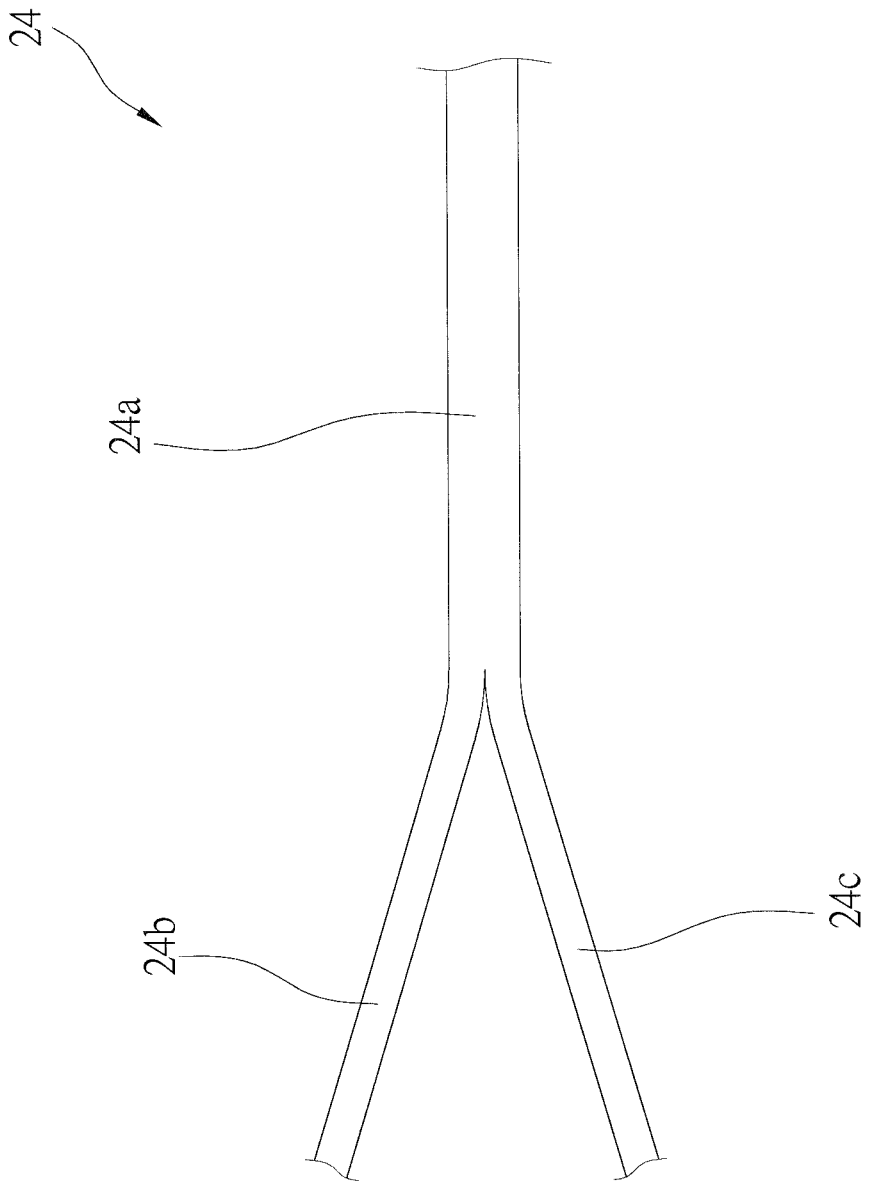


FIG. 9

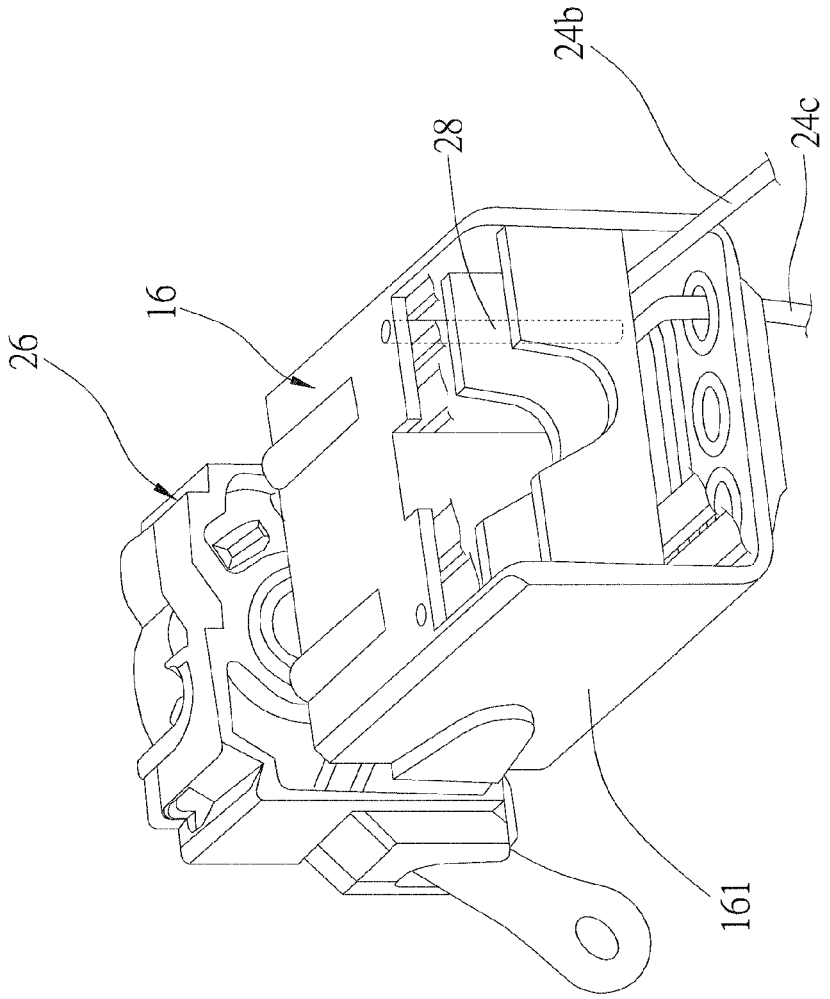


FIG.10

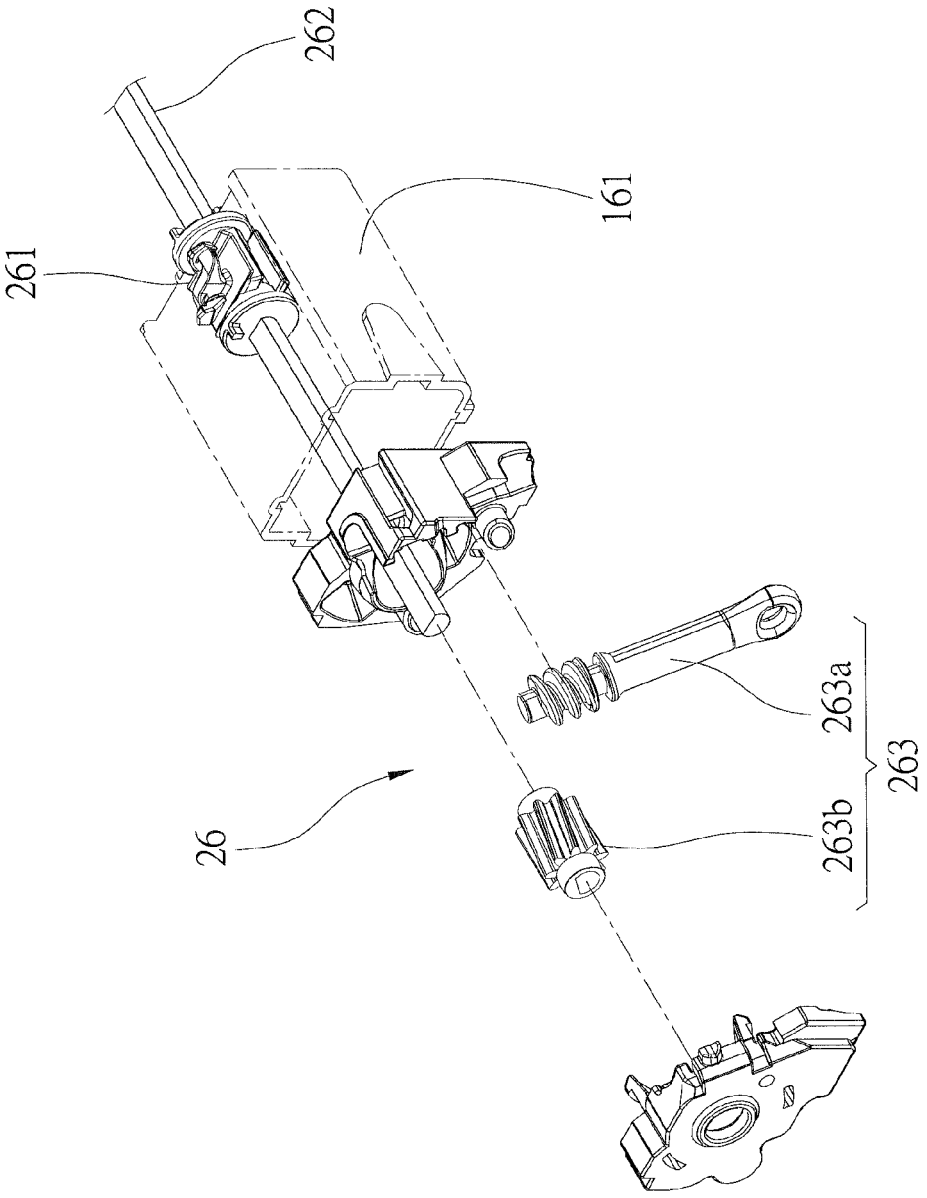


FIG.11

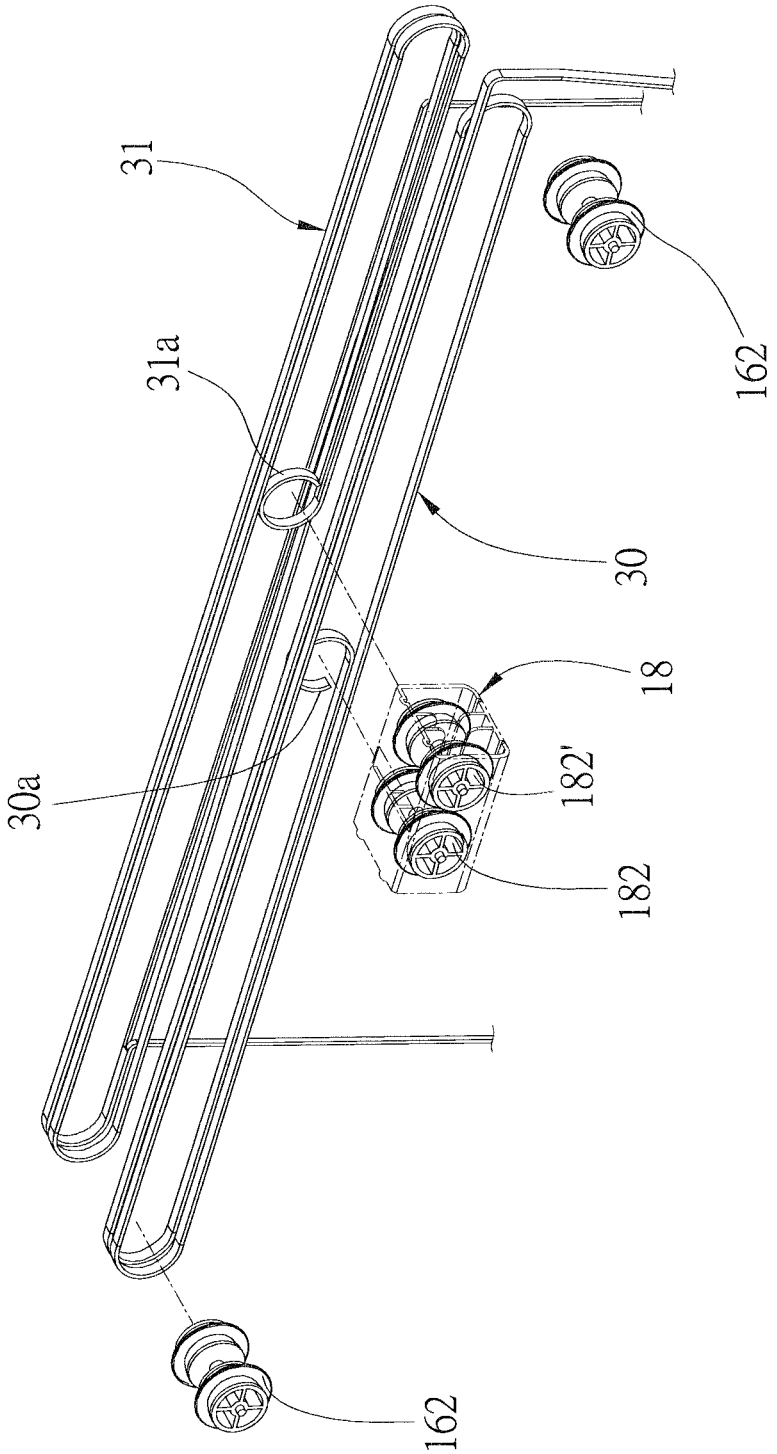


FIG.12

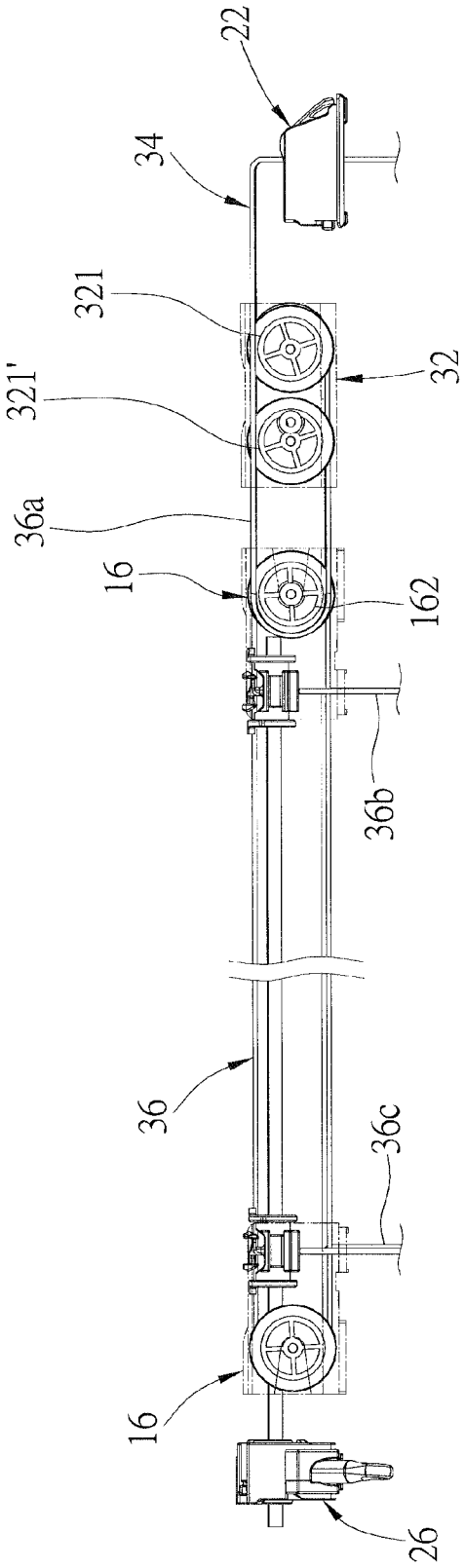


FIG.13

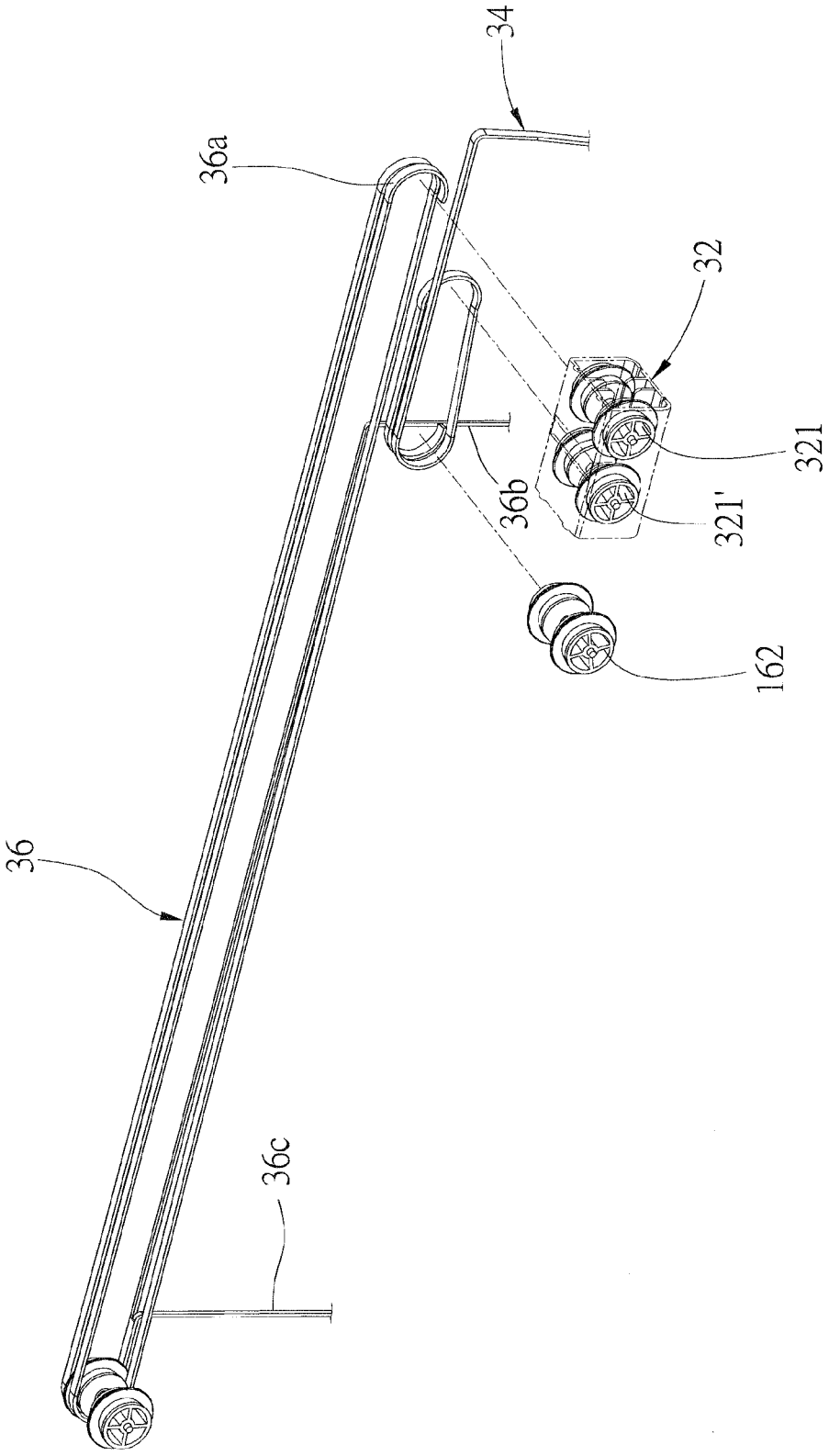


FIG.14

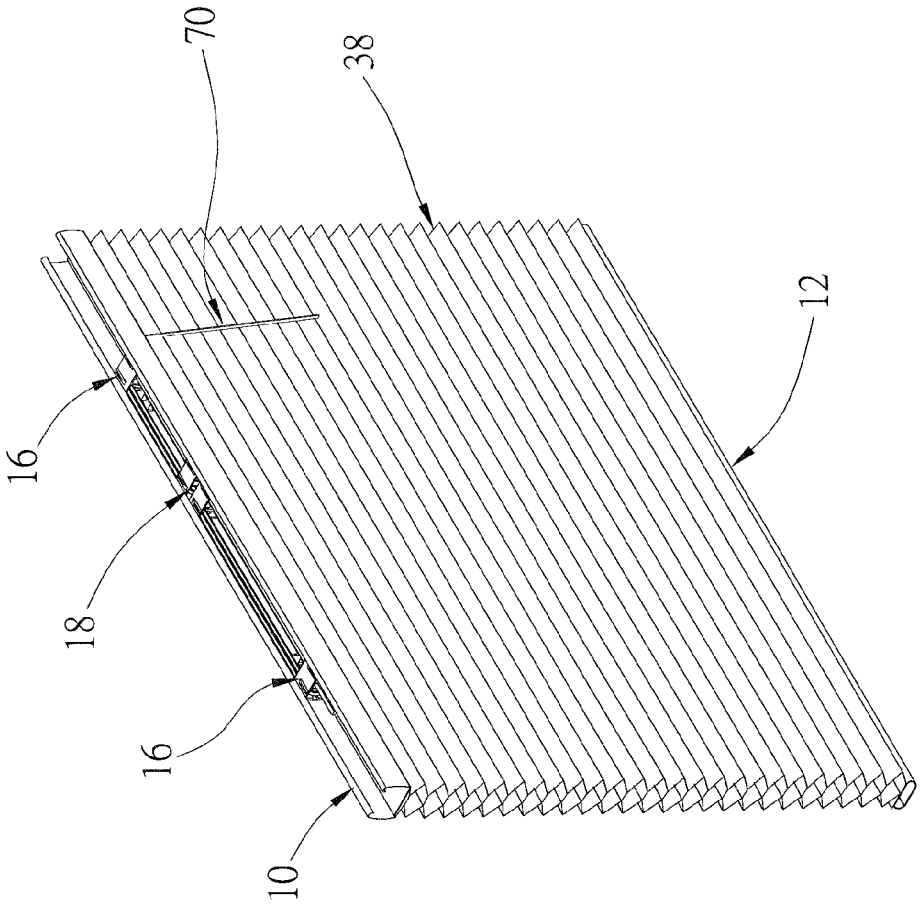


FIG.15

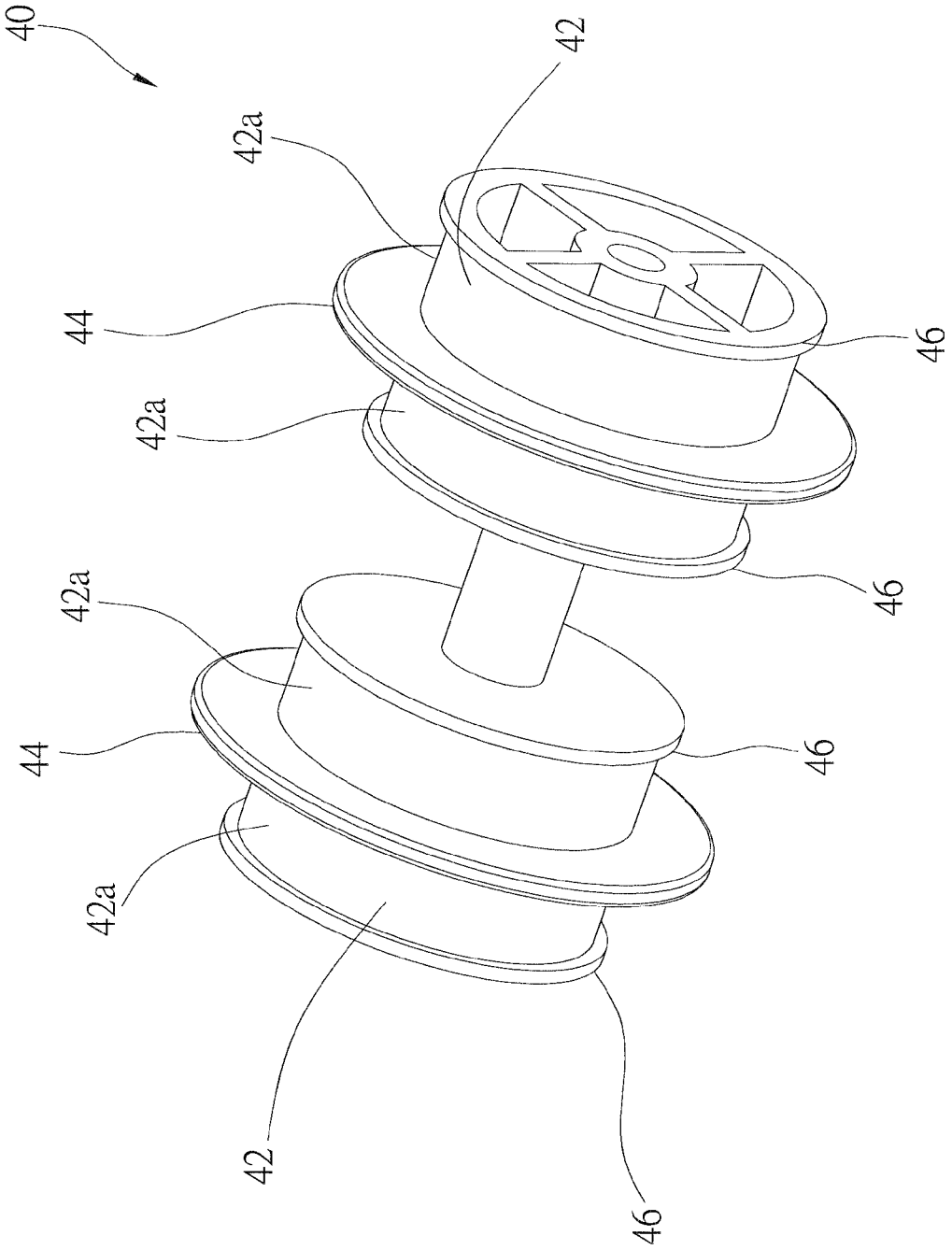


FIG.16

WINDOW COVERING

The current application claims a foreign priority to the patent application of China No. 201320245785.X filed on May 8, 2013.

BACKGROUND OF THE INVENTION

1. Technical Field

The present invention relates to a covering of a building opening, and more particularly to a window covering which is operated in an easy and less-strength way.

2. Description of Related Art

A conventional window covering includes a headrail, a bottom rail, and slats between the headrail and the bottom rail. The conventional window covering usually has two cords, each of which has an end fixed to the bottom rail, and then passing through the slats (this section is called lift cord), running over pulleys in the headrail, and then extending out of the headrail (this section is called control cord). Therefore, a user may pull or release the control cords to lift or lower the bottom rail.

In the view of consumers, except the look of the covering, the function and operation are important issues when they are going to buy a window covering. For example, whether the cord is easy to be pulled is an important concern when the consumers choose the window covering with the cords.

For the balance of the bottom rail, there needs two or more cords in the conventional window covering, which means there will be a plurality of control cords. The control cords are always easily getting twist after pulling or releasing for several times, and the twisted control cords are harmful to lift and lower the bottom rail. Furthermore, multiple control cords may lead to accidents. Children might be strangled by the loop created by the twisted control cords. In addition, sometime the control cords are not moved synchronously, and that will make the bottom rail lean. In some window coverings, they provide a cord connector to collect the control cords, however, it only has limited function.

BRIEF SUMMARY OF THE INVENTION

In view of the above, the primary objective of the present invention is to provide a window covering without the drawback of multiple control cords of the conventional window covering.

In order to achieve the objective of the present invention, a window covering including a headrail; a bottom rail; a shading member between the headrail and the bottom rail; two pulley assemblies received in the headrail, and each having a sliding member; a car received in the headrail for reciprocation, and having two second sliding members; a control cord running around the first sliding member of one of the pulley assemblies and one of the second sliding members of the car, and then going out of the headrail to form the control cord; and a transmission cord having two branch sections, wherein the branch sections running around the first sliding member of the other one of the pulley assemblies and the other one of the second sliding members of the car, and then going out of the headrail to be connected to the bottom rail.

In an embodiment, each of the pulley assembly further has a first frame, in which the first sliding member is received; the first frame has an opening for the corresponding branch section of the transmission cord to pass.

In an embodiment, the first frame of each of the pulley assembly is provided with two locking slots at an inner side thereof; each of the first sliding members has a wheel and a flange on a tread of the wheel; the flange engages the locking slots; the flange divides the tread of the wheel into two cord treads, and the control cord runs around one of the cord treads of the first sliding member, and the transmission cord runs around the other one of the cord treads of the first sliding member.

In an embodiment, the cord treads of the first sliding member respectively slope toward flange.

In an embodiment, the wheel further has two edge flanges at opposite edges of the tread thereof.

In an embodiment, the first frame of each of the pulley assemblies further has two second locking slots on the inner side; an axle, which is connected to the sliding member, having opposite ends engaging the second locking slots respectively.

In an embodiment, each of the second locking slots has an open end and a closed end; a width at the open end is wider than that at the closed end; the axle engages the second locking slot via the open end and stops at the closed end.

In an embodiment, the window covering further includes a tilting assembly and two ladders, wherein the tilting assembly has two fixed cores, a shaft, and a control unit; the fixed cores are received in the headrail; the shaft is connected to the fixed cores; an end of the shaft passes through the corresponding fixed core, and then is connected to the control unit; the ladders have ends connected to fixed cores respectively, and then pass through the shading member to be connected to the bottom rail.

In an embodiment, the first frame of each of the pulley assemblies further includes a carrying portion to receive the fixed core.

In an embodiment, the window covering further includes a cord lock to hold or release the control cord.

In an embodiment, the transmission cord further has a main section; both the branch sections are connected to an end of the main section; the main section runs around the first sliding member of the other one of the pulley assemblies and the other one of the second sliding member of the car.

In an embodiment, the main section and the branch sections are made by sewing, knotting, bonding, or gluing a plurality of filaments.

In an embodiment, the main section and the branch sections are flat.

In an embodiment, the window covering further includes a separating member between the branch sections.

In an embodiment, the car further has a second frame, in which the second sliding member is received.

With such design, it may prevent multiple cords' twisting, lower the chance of a malfunction, and make the replacement easier.

BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWINGS

The present invention will be best understood by referring to the following detailed description of some illustrative embodiments in conjunction with the accompanying drawings, in which

FIG. **1** is a perspective view of a first preferred embodiment of the present invention;

FIG. **2** is a perspective view of the first preferred embodiment of the present invention, showing the mechanism in the headrail;

FIG. **3** is an exploded view of FIG. **2**;

FIG. **4** is another perspective view of FIG. **2**;

FIG. **5** is a perspective view of the first frame of the first preferred embodiment of the present invention;

FIG. **6** is a lateral view of the first sliding member of the first preferred embodiment of the present invention;

FIG. **7** is a lateral view of the first preferred embodiment of the present invention, showing the first sliding member installed in the first frame;

FIG. **8** is a perspective view of the second frame of the first preferred embodiment of the present invention;

FIG. **9** is a lateral view of the transmission cord of the first preferred embodiment of the present invention;

FIG. **10** is a perspective view of the first preferred embodiment of the present invention, showing the arrangement of the separating member;

FIG. **11** is an exploded view of the tilting assembly of the first preferred embodiment of the present invention;

FIG. **12** is a perspective view of a second preferred embodiment of the present invention, showing the control cord and the pulley assemblies.

FIG. **13** is sketch diagram of a third preferred embodiment of the present invention, showing the mechanism in the headrail;

FIG. **14** a perspective view of the control cord and the transmission cord of the preferred embodiment of the present invention as shown in FIG. **13**;

FIG. **15** is a perspective view of the window covering of a fourth preferred embodiment of the present invention; and

FIG. **16** is a perspective view of the sliding member with the flange.

DETAILED DESCRIPTION OF THE INVENTION

As shown in FIG. **1** to FIG. **4**, a window covering **100** of the first preferred embodiment of the present invention includes a headrail **10**, a bottom rail **12**, a shading member **14**, two pulley assemblies **16**, a car **18**, a control cord **20**, a cord lock **22**, a transmission cord **24**, a tilting assembly **26**, and a plurality of separating members **28**.

The headrail **10** is fixed on a wall. The shading member **14** has a plurality of parallel slats **14***a*, which are between the headrail **10** and the bottom rail **12**, and are connected to the headrail **10** and the bottom rail **12** through two ladders **15**. The ladders **15** make the slats **14***a* tilt.

The pulley assemblies **16** are received in the headrail **10**, each of which has a first frame **161**, a sliding member **162**, and an axle **163**. As shown in FIG. **5**, the first frame **161** is a rectangular hollow member, having four walls at a top, a bottom, a left, and a right thereof, and has a room **16***a* within the walls. On inner sides of the top and bottom walls each has two first locking slots **161***a*, and on inner sides of the left and right walls each has a second locking slot **161***b*. Each second locking slot **161***b* has an opened end A**1** and a closed end A**2**, and a width of the second locking slot **161***b* gradually increases from the closed end A**2** to the opened end A**1**. The first frame **161** further has a carrying portion **161***c*, which is a recess on a top of a rear wall, and a plurality of openings **161***d* on the bottom wall and adjacent to the rear wall. The rear wall is connected to the left and right walls, and is not connected to the top and bottom walls, so that two openings are formed on the first frame **161**, one of the openings is on a top side of the first frame **161** between the top wall and the rear wall, and the other opening is on a rear side of the first frame **161** between the bottom wall and the rear wall.

As shown in FIG. **6**, the first sliding member **162** has two wheels **162** and an axial bore **162***b* through centers of the wheels **162**, and the axle **163** is inserted into the axial bore **162***b*. Opposite ends of the axle **163** enter the second locking slots **161***b* from the opened ends A**1** respectively and stop at the closed ends A**2** to receive the wheels **162** in the room **16***a* of the first frame **161** for free rotation. The tapered second locking slots **161***b* are helpful to the installation of the first sliding member **162**. Each wheel **162***a* is provided with a flange **162***c* on a tread thereof, and the flanges **162***c* are engaged with the first locking slots **161***a* to stabilize the rotations of the wheels **162***a*. The tread of each wheel **162***a* is a concave surface, and the flange **162***c* is at the lowest portion of the concave surface. In other words, the tread is divided by the flange **162***c* to have two cord treads **16***b*, and the cord treads **16***b* slope toward flange **162***c* respectively.

In practice, the pulley assemblies **16** could work without the first frames, that is, the axle **163** of each pulley assembly **16** could be fixed to a wall of the headrail **10**, and the wheels **162** are connected to the corresponding axes **163** respectively.

The car **18** is received in the headrail **10** for reciprocation between the pulley assemblies **16**. The car **18** has a second frame **181** and two second sliding members **182**, **182'** received in the second frame **181**. As shown in FIG. **8**, the second frame **181** is a rectangular hollow member, having four walls at a top, a bottom, a left, and a right thereof. On an inner side of the top wall has two upper locking slots **181***a*, on an inner side of the bottom wall has two lower locking slots **181***b*, and on the left and right walls each has two lateral bores **181***c*. The second sliding members **182**, **182'** are the same as the first sliding members **162** each having two wheels **182***a* and an axial bore **182***b* through the wheels **182***a*. The wheels **182***a* are received in the second frame **181**, and an axle **10** is inserted into the lateral bores **181***c* and the axial bore **182***b* to let the wheels **182***a* rotate freely in the second frame **181**. Each wheel **182***a* is provided with a flange **183***c* as well to engage the upper and the lower slots **181***a*, **181***b*. In an embodiment, the lateral bores **181***c* of the second frame **181** are replaced by the second locking slots **161***b* of the first frame **161**.

As shown in FIG. **2** and FIG. **3**, the control cord **20** has an end fastened to the second sliding members **182** of the car **18**, and then runs around second sliding member **182** and the first sliding member **162** of the right pulley assembly **16** to form a plurality of loops, passes through the cord lock **22**, and goes out of the headrail **10** for user to hold it to pull or release. More specifically, each of the plurality of loops surrounds around the first sliding member **162** and the second sliding member **182** of the car **18**. The cord lock **22** is a conventional device to hold or release the control cord **20**. The flanges **162***c*, **183***c* of the first and the second sliding member **162**, **182** may separate the control cord **20** wound on the wheels to prevent the control cord **20** from twisting, and the sloping cord treads may prevent the control cord **20** from escaping from the wheels. It may ensure smooth movements of these elements while the user pulls or releases the control cord **20**. In an embodiment, the control cord **20** is flat, which is made of a plurality of twisted filaments.

The transmission cord **24** runs around the first sliding member **162** of the left pulley assembly **16** and the second sliding member **182'** of the car **18**. As shown in FIG. **9**, the transmission cord **24** is a single Y-shaped belt having a main section **24***a* and two branch sections **24***b*, **24***c* connected to an end of the main section **24***a*. A width of the main section **24***a* is larger than that of the branch sections **24***b*, **24***c*. A distal end of the main section **24***a* is fastened to the second sliding member **182'**, and the branch sections **24***b*, **24***c* pass through the openings **161***d* of the first frames **161** respectively, and then go out of the headrail **10**, pass through the slats **14***a*, and finally are fastened to the bottom rail **12**. While the car **18** is moving because the control cord **20** is pulled or released, the bottom rail **12** will be lifted or lowered to fold and unfold the window covering **100**.

However, the transmission cord **24** may include the branch sections **24***b*, **24***c* only. Each branch section **24***b*, **24***c* has an end passing through the corresponding first frame **161**, the headrail **10**, and the slats **14***a* in sequence before they are fastened to the bottom rail **12**. The branch sections **24***b*, **24***c* run around the first sliding member **162** of the left pulley assembly **16** and the second sliding member **182'** of the car **18** for several loops, and then the branch sections **24***b*, **24***c* are selectively fastened to an inner wall of the headrail **10**, the first frame **161** of the pulley assembly **16**, or the second frame **181** of the car **18**. In an embodiment, the branch sections **24***b*, **24***c* are directly fastened to the second frame **181** of the car **18**. In an embodiment, the ends of the branch sections **24***b*, **24***c* which are fastened to the second frame **181** of the car **18**, are located at a plane, and the plane is vertical to an elongated direction of the headrail **10**. With this structure, the transmission cord **24** may achieve the same function without the main section **24***a*.

As shown in FIG. **10**, the separating member **28** are posts vertically connected to the first frame **161** of the left pulley assembly **16**, and the branch sections **24***b*, **24***c* go separately by the separating members **28**. The purpose of the separating members **28** is to prevent the branch sections **24***b*, **24***c* from twisting. The flanges and the cord treads on the sliding members provide the branch sections **24***b*, **24***c* with the same functions. The flat transmission cord **24** provides a larger area in touch with the wheels of the sliding members that may make the transmission cord **24** moves much smoothly.

The transmission cord **24** is made by sewing, knotting, bonding, or gluing a plurality of filaments to form a single cord, so that the transmission cord **24** is very strong to sustain a large pull force. Preferable, the transmission cord **24** is made of twisted filaments. Unlike the prior art which attaches or sews the branch sections to the main section, the transmission cord **24** of the present invention could move smoothly on the sliding members.

The control cord **20** and the transmission cord **24** could run around the sliding members for several loops. The number of the loops relates to the specifications of the window covering, furthermore, the number of the loops affects the strength the user pulls the control cord **20**. For a window covering with small and light slats **14***a*, it could reduce the number of the loops. With less loops, the bottom rail **12** will be moved faster. On the contrary, with more loops, it may lift and lower the heavy slats **14***a* and the bottom rail **12** with a small strength, but they are moved slower. In addition, the Y-shaped transmission cord **24** may balance the forces exerted on the bottom rail **12** to prevent the bottom rail **12** from leaning while the bottom rail **12** is being lifted or lowered.

As shown in FIG. **11**, the tilting assembly **26** has two fixed cores **261**, a shaft **262**, and a control unit **263**. The fixed cores **261** are received in the headrail **10** and rested in the carrying portions **161***c* of the first frames **161** respectively. The ladders **15** have ends fastened to the fixed cores **261** respectively (not shown). Both the fixed cores **261** are connected to the shaft **262**, and an end of the shaft **262** passes through one of the fixed cores **261** and is connected to the control unit **263**. The control unit **263** includes a worm rod **263***a* and a gear **263***b*. The gear **263***b* is meshed with the worm rod **263***a* and connected to the shaft **262**. The worm rod **263***a* is turned to drive the gear **263***b* to turn, and then the fixed cores **261** are turned through the shaft **262**. As a result, the ladders **15** will tilt the slats **14***a*.

FIG. **12** shows a window covering of the second preferred embodiment of the present invention, which is similar to the first preferred embodiment, except for the running of the control cord **30**. As shown in FIG. **12**, the control cord **30** has an end **30***a* fastened to the second sliding member **182** of the car **18**, and then runs around the first sliding member **162** of the left pulley assembly **16** and the first sliding member **162** of the right pulley assembly **16** twice before it goes out of the headrail (not shown). The same function will be achieved with this type of the running of the control cord **30**. The running of the transmission cord **31** is the same as above, an end **31***a* of the main section **31** is fastened to the second sliding member **182** of the car **18**, and then the main section **31** runs around the first sliding member **162** of the right pulley assembly **16** and the first sliding member **162** of the left pulley assembly **16** twice.

In the first preferred embodiment, the car **18** moves between the pulley assemblies **16**. FIG. **13** and FIG. **14** show a window covering of the third preferred embodiment of the present invention, in which a car **32** is located between the right pulley assembly **16** and the cord lock **22** for reciprocation therebetween. A control cord **34** has an end fastened to a second sliding member **321'** of the car **32** (it could fastened to another second sliding member **321** in another embodiment), runs around the first sliding member **162**, passes through the cord lock **22**, and then goes out of the headrail (not shown). A transmission cord **36** has an end of a main section **36***a* fastened to another second sliding member **321** of the car **32**, and two branch sections **36***b*, **26***c* passing through the pulley assemblies **16** respectively, going out of the headrail, passing through the slats, and then connected to the bottom rail. With such structure, bottom rail and the slats of the window covering of the third preferred embodiment will be lifted and lowered faster or easier.

In previous embodiments, the control cord and the transmission cord are fastened to the second sliding members of the car respectively, and the second sliding members are wheels. In an embodiment, the second sliding members are two reels fixed to the car, and each reel is provided with a flange just like FIG. **6** to separate the control cord and the transmission cord. In an embodiment, the control cord and the transmission cord are fastened to the same first sliding member of the pulley assembly or the first sliding members of the pulley assemblies respectively according to the weight of the shading member, a distance for moving the bottom rail, and the designed force for the user to exert.

FIG. **16** shows a sliding member **40** including a flange **42** at a middle of a tread and two edge flanges **46** at opposite edges of the tread. The same as above, a cord tread **42***a* is formed between the flange **42** and each edge flanges **46**, but the cord treads **42***a* are horizontal (no slope). The edge flanges **46** block the cords wound on the cord treads **42***a* to prevent the cords from escaping.

The shading member may be a cellular shade **38** as shown in FIG. **15** to replace the blind in the previous embodiments. For the cellular shade **38**, no tilting assembly and ladders are needed, and the cellular shade **38** is folded or unfolded by operating the control cord only.

It must be pointed out that the embodiments described above are only some preferred embodiments of the present invention. All equivalent structures which employ the concepts disclosed in this specification and the appended claims should fall within the scope of the present invention.

What is claimed is:

1. A window covering, comprising:

a headrail;

a bottom rail;

a shading member between the headrail and the bottom rail;

two pulley assemblies received in the headrail, wherein each of the two pulley assemblies has a first sliding member;

a car received in the headrail for reciprocation, and having two second sliding members;

a control cord running around the first sliding member of one of the pulley assemblies and one of the second sliding members of the car to form a plurality of loops, and then going out of the headrail, the first sliding member of one of the pulley assemblies and one of the second sliding members of the car are surrounded by each of the plurality of loops; and

a transmission cord having two branch sections, wherein the transmission cord runs around both the first sliding member of the other one of the pulley assemblies and the other one of the second sliding members of the car, the two branch sections go out of the headrail to be connected to the bottom rail;

wherein the transmission cord further has a main section; both the branch sections are connected to an end of the main section; the main section runs around the first sliding member of the other one of the pulley assemblies and the other one of the second sliding member of the car.

2. The window covering of claim **1**, further comprising a cord lock to hold or release the control cord.

3. The window covering of claim **1**, wherein the main section and the branch sections are made by sewing, knotting, bonding, or gluing a plurality of filaments.

4. The window covering of claim **1**, wherein the main section and the branch sections are flat.

5. The window covering of claim **1**, further comprising a separating member between the branch sections.

6. The window covering of claim **1**, wherein the car further has a second frame, in which the two second sliding members are received.

7. The window covering of claim **1**, wherein each of the pulley assemblies further has a first frame, in which the respective first sliding member is received; each first frame has an opening for a respective one of the two branch sections of the transmission cord to pass through.

8. The window covering of claim **7**, further comprising a tilting assembly and two ladders, wherein the tilting assembly has two fixed cores, a shaft, and a control unit; the fixed cores are received in the headrail; the shaft is connected to the fixed cores; an end of the shaft passes through the corresponding fixed core, and then is connected to the control unit; the ladders have ends connected to fixed cores respectively, and then pass through the shading member to be connected to the bottom rail.

9. The window covering of claim **8**, wherein the first frame of each of the pulley assemblies further includes a carrying portion to receive the fixed core.

10. The window covering of claim **7**, wherein the first frame of each of the pulley assembly is provided with two locking slots at an inner side thereof; each of the first sliding members has a wheel and a flange on a tread of the wheel; each of the flange engages the two locking slots of the respective first frame; each of the flange divides the tread of the wheel of the respective first sliding member into two cord treads, and the control cord runs around the two cord treads of the first sliding member of one of the pulley assemblies, and the transmission cord runs around the two cord treads of the first sliding member of the other one of the pulley assemblies.

11. The window covering of claim **10**, wherein each of the two cord treads of the respective first sliding member slopes toward the flange.

12. The window covering of claim **10**, wherein each wheel of the respective first sliding member further has two edge flanges at opposite edges of the tread of each wheel.

13. The window covering of claim **10**, wherein the first frame of each of the pulley assemblies further has two second locking slots on the inner side; an axle, which is connected to the respective first sliding member, having opposite ends engaging the second locking slots respectively.

14. The window covering of claim **13**, wherein each of the second locking slots has an open end and a closed end; a width at the open end is wider than that at the closed end; the axle engages the second locking slot via the open end and stops at the closed end.

* * * * *